Remarks

Further and favorable reconsideration is respectfully requested in view of the foregoing amendments and following remarks.

Thus, claims 1 and 2 have been cancelled, and claim 4 has been amended to recite that the non-disintegrating support layer and the disintegrating drug layer are multilayered by lamination, and also that at least one of the non-disintegrating support layer and the disintegrating drug layer is colored to distinguish one layer from the other layer. These features of the invention as set forth in amended claim 4 are supported by the disclosures in the first full paragraph on page 32, the paragraph bridging pages 40-41, and the last paragraph on page 81 of the specification.

Claim 13 has been amended to depend from claim 4, and also to modify the Markush terminology to be more in accord with U.S. practice.

Claim 14 has been cancelled.

The patentability of the presently claimed invention over the disclosures of the references relied upon by the Examiner in rejecting the claims will be apparent upon consideration of the following remarks.

Initially, the rejection of claims 1-2 and 13-14 under 35 U.S.C. §102(e) as being anticipated by Yates (US '510) has been rendered moot in view of the claim amendments. It is noted that claim 4, which is now the only independent claim in the application, is not included in this rejection.

The rejection of claims 1-2 and 4-6 under 35 U.S.C. §103(a) as being unpatentable over Takayanagi et al. (US '983) in view of Stanley et al. (US '114 and US '953), as applied to claims 4-6, is respectfully traversed.

Takayanagi et al. disclose adhesive medical tapes for the oral mucosa comprising a support layer composed of an intestine-soluble polymer and a medicament-containing layer composed of a water-soluble polymer containing an analgesic medicament, as pointed out by the Examiner. Further, this reference shows that the support layer contains hydroxypropylmethyl cellulose phthalate, and that a softening agent such as propylene glycol, glycerin and polyethylene glycol can be added to the support layer.

However, Takayanagi et al. do **not** disclose that **the support layer contains a synthetic water-soluble polymer compound** such as carboxyvinyl polymer (CVP), polyvinyl pyrrolidone (PVP), polyvinyl alcohol (PVA) and sodium polyacrylate (PAA-Na). Therefore, there is a high probability that delamination takes place between the support layer and the medicament-containing layer, since a synthetic water-soluble polymer compound is not contained in the support layer (see Tables 10 and 13 of the present application).

In contrast, the non-disintegrating support layer recited in amended claim 4 contains a synthetic water-soluble polymer compound and, therefore the problem of delamination as described above is not encountered in the present invention.

Further, amended claim 4 defines that the non-disintegrating support layer and the disintegrating drug layer are multilayered **by lamination** (laminated into a unitary structure). According to the claimed invention having such a feature, the boundary between the support layer and the drug layer is more clearly distinguished than in the patch obtained by coating. Furthermore, since the support layer and the drug layer are not partially mixed with each other, the fentanyl compound is not influenced by a pH-adjusting agent, thereby improving the stability of the fentanyl compound. In addition, this feature contributes to improving quantitative accuracy required for a pharmaceutical preparation.

On the other hand, Takayanagi et al. show that a support layer solution is spread on a release liner followed by drying to form a support layer, and then a medicament-containing layer solution is spread thereon and dried to form a two-layer type adhesive medical tape (column 4, lines 19-27 and Example 1). When the layer solutions are spread and dried on the release liner in this manner, the coating amount can be accurately controlled at a predetermined value in the first coating process by setting the clearance between a weir, such as a doctor roll, and the surface of the release liner at a predetermined dimension. However, the thickness of the dried first layer formed in a drying process after the first coating process varies depending upon minor variation of the conditions of the drying process and environmental conditions such as daily temperature and humidity. As a result, when a second coating is formed on the first layer, even if the clearance between the weir and the surface of the release liner is accurately set,

the thickness of the second coating layer further varies depending upon the variation of the thickness of the first layer, since the coating thickness of the second layer solution is determined by the clearance between the upper surface of the dried first layer formed by the first coating process and the weir. The degree of inaccuracy in the coating amount of the layer solution tends to increase as the number of spreading and drying processes increases. In addition, as the number of spreading and drying processes increases, the drying time increases. More specifically, the drying time for the second coating is about 1.5 times longer than that for the first coating.

According to the present invention, the support layer and the drug layer are multilayered by lamination instead of repeating the processes of spreading and drying the layer solutions on the release liner. Accordingly, a laminated or multilayered film-form edible oral mucosal patch can be prepared with good yield while overcoming the above-discussed conventional problems. In addition, the quantitative accuracy required for a pharmaceutical preparation can be greatly improved.

Furthermore, claim 4 defines that at least one of the non-disintegrating support layer and the disintegrating drug layer is colored to distinguish one layer from the other layer. This feature makes it possible to correctly adhere the intended layer of the patch to an oral mucous membrane and prevent the patch from being incorrectly adhered, and thus, handling of the patch by users can be improved.

It is apparent that these features of claim 4 are not taught or suggested in any way by the cited references, and accordingly, the presently claimed invention is considered to be clearly patentable over the references.

Therefore, in view of the foregoing amendments and remarks, it is submitted that each of the grounds of rejection set forth by the Examiner has been overcome, and that the application is in condition for allowance. Such allowance is solicited.

Respectfully submitted,

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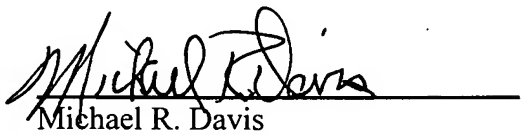
By: 

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